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10/593,585	09/21/2006	Ian C. Kegel	36-2020	1487

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NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER
WILCOX, JAMES J

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>21 September 2006</u>.
2a)☐ This action is **FINAL**.　　　　2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-10</u> is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-10</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>21 September 2006</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☒ All　b)☐ Some * c)☐ None of:
　　　1.☒　Certified copies of the priority documents have been received.
　　　2.☐　Certified copies of the priority documents have been received in Application No. _____.
　　　3.☐　Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>09/20/07; 10/25/07; 02/19/08; 06/12/08; 09/08/08</u>.
4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-10 are pending in this application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bernstein et al (US Patent No: 6,728,726 B1) hereinafter "Bernstein," in view of

Bernstein (US Patent No: 5,884,316 A) hereinafter "Bernstein ('316) further in view of

Andersson et al (Pub. No: US 2002/0046208 A1) hereinafter "Andersson."

With respect to claim 1, Bernstein discloses "Computer apparatus having:

i) one or more data processors; (Column 6, Lines 23-24, one or more processing

units as its processor)

ii) persistent storage means connectable to said one or more data processors,

said persistent storage means storing a plurality of data items, one or more of said data

items containing reference(s) to one or more other data items; (Column 13, Lines 42-44,

the prefetched objects, attributes, and structures may be held in various persistent

memory areas; Column 6, Lines 23-24, one or more processing units as its processor)

ii) volatile memory means, connectable to said one or more data processors, for

storing one or more of said data items; (Column 6, Lines 23-24, one or more processing

units as its processor)

iv) querying code executable by said one or more data processors to pass a query to said database management system software; (Column 6, Lines 23-24, one or more processing units as its processor; Column 9, Lines 31-35, the data storage system implements the Microsoft Repository application programming interface (API), the function used to query the data storage system is the "ExecuteQuery" function)

v) pre-fetching code executable by said one or more data processors to: (Column 6, Lines 23-24, one or more processing units as its processor; Column 8, Lines 16-32, the set of relevant object data varies depending on the prefetch strategies employed. The prefetch strategy fetches attribute data for each object in an object structure based on the attribute accessed in the first accessed object in the object structure)

and

b) automatically generate another query for said related data items," (Column 9, Lines 35-41, the data storage system uses the Microsoft Repository API, the predefined query that retrieves objects that are instances of a particular class or instances of any class that supports a given interface).

Bernstein does not explicitly disclose " iii) database management system software executable by said one or more data processors to respond to a query by passing data items meeting one or more criteria specified in said query from said persistent storage means to said volatile memory means."

However, Bernstein ('316) discloses "to make a persistent object accessible to programs, it must be loaded into volatile memory, meaning it must be copied from persistent to volatile storage and translated into a format appropriate for program access (Column 3, Lines 54-57).

Bernstein and Bernstein ('316) are analogous art because they are from the same field of endeavor involving caching.

At the time of invention, it would have been obvious to one of ordinary skill to in the art, having the teachings of Bernstein and Bernstein ('316) before him or her, to modify the teachings of Bernstein by adding a method to copy an object from persistent to volatile storage as taught by Bernstein ('316). The motivation for doing so would enable a user to make persistent objects accessible to programs. The cited additional element would not interfere with the functionality of steps previously claimed and would perform the same function. Therefore it would have been obvious to combine Bernstein with Bernstein ('316) to obtain the invention as specified in the instant claim(s).

Bernstein and Bernstein ('316) do not explicitly disclose "a) analyze response data items provided in response to said query to find related data items related to said response data items."

However, Andersson discloses "in Figure 5, a query is created for an object, the

query consists of a string of object names. Available objects are selected based on the

query. The different relationships of the selected objects are analyzed. Based on the

analysis, an object is selected. The relationships of the selected objects are compared

to the query to find a set of relationships between the objects that match the query. If a

matching set of relationships are found a response to the query by a path of related

objects is determined based on the found set of relationships."

Bernstein, Bernstein ('316) and Andersson are analogous art because they are

from the same field of endeavor involving caching.

At the time of invention, it would have been obvious to one of ordinary skill to in

the art, having the teachings of Bernstein, Bernstein ('316) and Andersson before him or

her, to modify the teachings of Bernstein, Bernstein ('316) by adding a method to

analyze relationships associated with an object as taught by Andersson. The motivation

for doing so would enable a user to associated relationships with objects. The cited

additional element would not interfere with the functionality of steps previously claimed

and would perform the same function. Therefore it would have been obvious to combine

Bernstein, Bernstein ('316) with Andersson to obtain the invention as specified in the

instant claim(s).

With respect to claim 3, the combination of Bernstein, Bernstein ('316) and

Andersson discloses "Computer apparatus according to claim 1 comprising a client

computer and a server computer, each having at least one of said processors,

(Bernstein, Column 6, Lines 23-24, one or more processing units as its processor;

Column 7, Line 8, client, server)

said server computer having control over said persistent memory (Bernstein,

Column 7, Line 8, data storage system is the server, Column 10, Line 21, memory can

be persistent such as a disk) and said client computer having control over said volatile

memory. (Bernstein, Column 13, Lines 42-44, the prefetched objects, attributes, and

structures may be held in various persisent memory areas, Column 10, Lines 16 & 20-

21, stored in the memory of the client, the memory can be non-persistent (RAM))

With respect to claim 7, the combination of Bernstein, Bernstein ('316) and

Andersson discloses "Computer apparatus according to claim 1 wherein said data items

are software objects," (Bernstein, Column 14, Lines 20-21, Microsoft's COM

(Component Object Model) is an example of a software component model).

4.   Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein,

Bernstein '316, and Andersson as applied to claims 1, 3, and 7 above, further in view of

Porter et al (Pub. No: US 2002/0099737 A1) hereinafter "Porter."

With respect to claim 2, the combination of Bernstein, Bernstein ('316) and

Andersson do not explicitly disclose "Computer apparatus according to claim 1 wherein

each of said data items contains metadata about a media file, said metadata including

said reference(s), each of which reference(s) refers, directly or indirectly, to a related

metadata data item whose metadata is about a media file whose content is semantically-related to the content of the first media file.

However, Porter discloses "original metadata associated with media on a computer network includes analyzing each field of the URL of the media. Each field is analyzed to identify new metadata associated with each field. Identified new metadata is added to the original metadata," ([0009]).

Porter discloses "sources of metadata include media files," ([0026])

Porter also discloses "media metadata based on a variety of semantic data fields," ([0074).

Bernstein, Bernstein ('316), Andersson and Porter are analogous art because they are from the same field of endeavor involving metadata.

At the time of invention, it would have been obvious to one of ordinary skill to in the art, having the teachings of Bernstein and Porter before him or her, to modify the teachings of Bernstein, Bernstein ('316), and Andersson by adding a metadata associated with media as taught by Porter. The motivation for doing so would enable a user to use metadata related to media files. The cited additional element would not interfere with the functionality of steps previously claimed and would perform the same function. Therefore it would have been obvious to combine Bernstein, Bernstein ('316), Andersson with Porter to obtain the invention as specified in the instant claim(s).

5.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein,

Bernstein '316, and Andersson as applied to claims 1, 3, and 7 above, further in view of

Zwiegincew et al (US Patent No: 6,633,968 B2) hereinafter "Zwiegincew."

With respect to claim 4, the combination of Bernstein, Bernstein ('316) and

Andersson do not explicitly disclose "Computer apparatus according to claim 3 wherein

said data items are transferred in the form of pages of memory.

However, Zwiegincew discloses "in Figure 3, Item 316, transfer copies of

memory pages in RAM."

Bernstein, Bernstein ('316), Andersson and Zwiegincew are analogous art

because they are from the same field of endeavor involving prefetching.

At the time of invention, it would have been obvious to one of ordinary skill to in

the art, having the teachings of Bernstein and Zwiegincew before him or her, to modify

the teachings of Bernstein, Bernstein ('316), and Andersson by adding a method for

transferring copies of memory pages in RAM as taught by Zwiegincew. The motivation

for doing so would enable a user to set up page tables entries to reflect new memory

page in RAM (Figure 3, Item 318) . The cited additional element would not interfere with

the functionality of steps previously claimed and would perform the same function.

Therefore it would have been obvious to combine Bernstein, Bernstein ('316), and

Andersson with Zwiegincew to obtain the invention as specified in the instant claim(s).

6.   Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bernstein, Bernstein '316, and Andersson as applied to claims 1, 3, and 7 above,

further in view of Mangat et al (US Patent No: 6,049,799 A) hereinafter "Mangat."

With respect to claim 5, the combination of Bernstein, Bernstein ('316) and

Andersson do not explicitly disclose "Computer apparatus according to claim 3 in which

said server computer resolves said query and sends the selected data items to said

client computer.

However, Mangat discloses in FIG 2, that the client contains a query resolver."

Bernstein, Bernstein ('316), Andersson, and Mangat are analogous art because

they are from the same field of endeavor involving prefetching.

At the time of invention, it would have been obvious to one of ordinary skill to in

the art, having the teachings of Bernstein and Mangat before him or her, to modify the

teachings of Bernstein, Bernstein ('316), and Andersson by adding a client that contains

a query resolver as taught by Mangat. The motivation for doing so would enable a user

to resolving a query related to an object. The cited additional element would not

interfere with the functionality of steps previously claimed and would perform the same

function. Therefore it would have been obvious to combine Bernstein, Bernstein ('316), and Andersson with Mangat to obtain the invention as specified in the instant claim(s).

With respect to claim 6, the combination of Bernstein, Bernstein ('316) and Andersson do not explicitly disclose "Computer apparatus according to claim 3 in which said server computer sends said data items to said client computer and said client computer resolves said query.

However, Mangat discloses in FIG 2, that the client contains a query resolver."

Bernstein, Bernstein ('316), Andersson and Mangat are analogous art because they are from the same field of endeavor involving prefetching.

At the time of invention, it would have been obvious to one of ordinary skill to in the art, having the teachings of Bernstein and Mangat before him or her, to modify the teachings of Bernstein, Bernstein ('316), and Andersson by adding a client that contains a query resolver as taught by Mangat. The motivation for doing so would enable a user to resolving a query related to an object. The cited additional element would not interfere with the functionality of steps previously claimed and would perform the same function. Therefore it would have been obvious to combine Bernstein, Bernstein ('316), and Andersson with Mangat to obtain the invention as specified in the instant claim(s).

7.   Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bernstein, Bernstein '316, as applied to claims 1, 3, and 7 above, further in view of Ali et

al (US Patent No: 5,896,506 A) hereinafter "Ali."

With respect to claim 8, the combination of Bernstein discloses "A method of

operating computer apparatus comprising a processor and first and second data stores

accessible to said processor, (Column 6, Lines 23-24, one or more processing units as

its processor)

access by said processor to data held in said first store being quicker than

access to said second store, (Column 6, Lines 23-24, one or more processing units as

its processor. It is obvious to those skilled in the art that one processor could have a

faster speed than another and could access one faster than the other)

said method comprising the steps of:

storing a plurality of data items in said second data store, (Column 15, Lines 26-

30, prefetching and caching has been described in terms of an object database or

repository, that other means of storing persistent objects can be readily substituted).

together with relationship data indicating relationships between said data items;

and executing a process on said processor to: (Column 6, Lines 23-24, one or more

processing units as its processor)

i)   fetch one or more data items from said second store together with

relationship data indicating one or more related data items semantically

related to said fetched data item; (Column 11, Lines 27-30, prefetching

an attribute A for all objects in the structure is accomplished by

performing a join of the structure context table with the attribute table

containing attribute A. The attribute table may be a relationship table or a

scalar value table; Column 6, Lines 59-60, the data storage system can

be based on a semantic data model).

Bernstein does not explicitly disclose "ii) responsive to receipt of said relationship

data, fetch one or more of said semantically related data items from said second

memory to said first memory."

However, Bernstein ('316) discloses "to make a persistent object accessible to

programs, it must be loaded into volatile memory, meaning it must be copied from

persistent to volatile storage and translated into a format appropriate for program

access (Column 3, Lines 54-57).

Bernstein and Bernstein ('316) are analogous art because they are from the

same field of endeavor involving caching.

At the time of invention, it would have been obvious to one of ordinary skill to in

the art, having the teachings of Bernstein and Bernstein ('316) before him or her, to

modify the teachings of Bernstein by adding a method to copy an object from persistent

to volatile storage as taught by Bernstein ('316). The motivation for doing so would

enable a user to make persistent objects accessible to programs. The cited additional

element would not interfere with the functionality of steps previously claimed and would

perform the same function. Therefore it would have been obvious to combine Bernstein

with Bernstein ('316) to obtain the invention as specified in the instant claim(s).

Bernstein and Bernstein ('316) do not explicitly disclose "a) analyze response

data items provided in response to said query to find related data items related to said

response data items."

Bernstein and Bernstein ('316) do not explicitly disclose "iii) check, on

subsequent requests for a data item, whether said requested data item is present

in said first store and read said data item from said first store if found."

However, Ali discloses "in FIG. 2A a check is done to see if the object is stored in

the cache server. Then the cache server sends a copy of the object is found (which was

interpreted as a read).

Bernstein, Bernstein ('316) and Ali are analogous art because they are from the

same field of endeavor involving caching.

At the time of invention, it would have been obvious to one of ordinary skill to in

the art, having the teachings of Bernstein, Bernstein ('316), Andersson before him or

her, to modify the teachings of Bernstein, Bernstein ('316), Andersson by adding a

check to see if the object is stored in the cache server and then the cache server sends

a copy of the object if found as taught by Ali. The motivation for doing so would enable a

user to request retrieval of an object which can later be sent from the object server to

the requesting client if the object is stored in the cache server. The cited additional

element would not interfere with the functionality of steps previously claimed and would

perform the same function. Therefore it would have been obvious to combine Bernstein,

Bernstein ('316), Andersson with Ali to obtain the invention as specified in the instant

claim(s).

With respect to claim 10, the combination of Bernstein, Bernstein ('316), and Ali

discloses "A method according to claim 8 in which said second store holds a database,"

(Bernstein, Column 6, Lines 40-42, data storage system is an object oriented database

providing persistent storage of objects in various types and classes).

8.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein,

Bernstein '316, and Ali as applied to claims 1, 3, and 7 above, further in view of Porter

et al (Pub. No: US 2002/0099737 A1) hereinafter "Porter."

With respect to claim 9, the combination of Bernstein, Bernstein ('316) and Ali do

not explicitly disclose "A method according to claim 8 in which said data items comprise

an identifier of a media file and metadata representing what is portrayed by said

identified media file.

However, Porter discloses "original metadata associated with media on a

computer network includes analyzing each field of the URL of the media. Each field is

analyzed to identify new metadata associated with each field. Identified new metadata is

added to the original metadata," ([0009]).

Porter discloses "sources of metadata include media files," ([0026])

Porter also discloses "media metadata based on a variety of semantic data

fields," ([0074).

Porter discloses in ([0025]-[0026]), identifiers associated with metadata which

comprises a media file."

Bernstein, Bernstein ('316), Ali and Porter are analogous art because they are

from the same field of endeavor involving metadata.

At the time of invention, it would have been obvious to one of ordinary skill to in

the art, having the teachings of Bernstein and Porter before him or her, to modify the

teachings of Bernstein, Bernstein ('316), and Ali by adding a metadata associated with

media and identified by an identifier as taught by Porter. The motivation for doing so

would enable a user to use metadata related to media files. The cited additional element

would not interfere with the functionality of steps previously claimed and would perform

the same function. Therefore it would have been obvious to combine Bernstein,

Bernstein ('316), Ali with Porter to obtain the invention as specified in the instant

claim(s).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JAMES J. WILCOX whose telephone number is

(571)270-3774. The examiner can normally be reached on Days: M-H Times: 6:30

A.M.-6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tony Mahmoudi can be reached on (571)272-4078. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJW (February 23, 2010)

/Greta L. Robinson/
Primary Examiner, Art Unit 2169